

## A B S T R A C T

A METHOD AND APPARATUS FOR DETECTING THE ELECTRICAL  
POSITION OF THE ROTOR OF AN ELECTRICAL MACHINE COUPLED TO  
5 AN INTERNAL COMBUSTION ENGINE

In order to detect the electrical position of the  
rotor of an electrical machine (4) coupled (6) to an  
internal combustion engine (7) provided with a sensor (8)  
10 delivering a first angular position signal for speeds of  
rotation greater than a minimum measurement speed ( $V_M$ ), a  
second signal is generated on the basis of the  
characteristics of the electrical machine, the second  
signal being representative of an estimated angular  
15 position of the rotor for speeds of rotation that are  
less than an estimation speed ( $V_A$ ); depending on the  
estimated speed of rotation, means for controlling the  
machine are supplied either with the estimated angular  
position value when the estimated speed is below a first  
20 threshold ( $S_1$ ), or with the signal from the sensor when  
the estimated speed is greater than a second threshold  
( $S_2$ ), and a changeover is performed from one signal to  
the other in a range lying between the first threshold  
and the second threshold.

25

30

35

Translation of the title and the abstract as they were when originally filed by the  
Applicant. No account has been taken of any changes that may have been made  
subsequently by the PCT Authorities acting ex officio, e.g. under PCT Rules 37.2,  
38.2, and/or 48.3.